

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common Name: L-Citrulline DL-Malate(2:1)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
L-Citrulline DL-Malate(2:1)	54940-97-5	100%

3. HAZARDS IDENTIFICATION

No specific hazards are encountered under normal product use.

4. FIRST AID MEASURES

Contact with skin:

Wash with plenty of water and soap.

Contact with eyes:

Wash immediately with water for at least 15 minutes.

Swallowing:

A suspension of activated charcoal in water, or liquid paraffin may be administered.

Inhalation:

Ventilate the premises. The patient is to be removed immediately from the contaminated premises and made to rest in a well ventilated area. Should the patient feel unwell, SEEK FOR MEDICAL ATTENTION.

5. FIRE FIGHTING MEASURES

Recommended extinguishers:

Water, CO₂, Foam, Chemical powders, according to the materials involved in the fire.

Extinguishers not to be used:

None in particular.

Risks arising from combustion:

Avoid inhaling the fumes.

Protective equipment:

Use protection for the respiratory tract.

6. ACCIDENTAL RELEASE MEASURES

Measures for personal safety:

Use gloves and protective clothing.

Environmental measures:

Limit leakages with earth or sand.

If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

Cleaning methods:

If the product is in a liquid form, stop it from entering the drainage system.

Recover the product for re-use if possible, or for elimination. The product might, where appropriate, be absorbed by inert material.

After the product has been recovered, rinse the area and materials involved with water.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact and inhalation of the vapours. See paragraph 8 too.

Do not eat or drink while working.

Incompatible materials:

None in particular.

Storage conditions:

Instructions as regards storage premises:

Adequately ventilated premises.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Respiratory protection:

Not needed for normal use.

Protection for hands:

Not needed for normal use.

Eye protection:

Not needed for normal use.

Protection for skin:

No special precaution must be adopted for normal use.

Exposure limit(s) (ACGIH):

None.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour: White crystals or crystalline Powder.

Odour: Characteristic

Melting point: not available

Boiling point: not available

Flash point: not available

Solid/gas flammability: not available

Autoignition temperature: not available

Explosive properties: as for all organic powders, explosion hazard may exist in presence of sparks, flames, static electricity etc., if dusts are released in the atmosphere

Oxidizing properties: none specific known

Vapour pressure: not applicable

Relative density: not available

Solubility in water: slightly

Lipid solubility: not available

Partition c. (n-octanol/H₂O): not available

Vapour density: not applicable

10. STABILITY AND REACTIVITY

Conditions to avoid:

Stable under normal conditions.

Substances to avoid:

None in particular.
Hazardous decomposition products:
None.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

Adopt good working practices, so that the product is not released into the environment.

13. DISPOSAL CONSIDERATION

Recover if possible. In so doing, comply with the local and national regulations currently in force.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

88/379/EEC (Classification and Labelling):

The substance should not be considered as dangerous accordingly to dir. 67/548/EEC.

Where applicable, refer to the following regulatory provisions :

D.Lgs. 334/99 (Seveso Directive II).

16. OTHER INFORMATION

Main bibliographic sources:

NIOSH - Registry of toxic effects of chemical substances (1983)

I.N.R.S. - Fiche Toxicologique

CESIO - Classification and labelling of anionic, nonionic surfactants (1990)

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.